

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

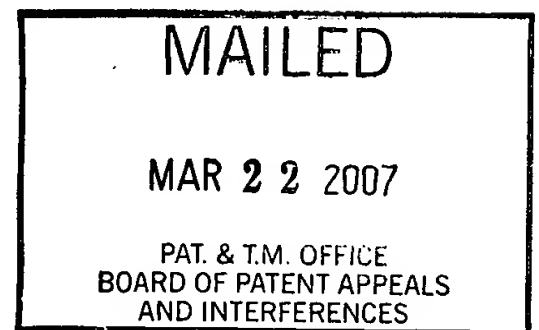
UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte CARLO NERI and CARRADO CALLIEROTTI

Appeal 2007-0101
Application 09/692,025
Technology Center 1700

ON BRIEF



Before ADAMS, GRIMES, and LINCK, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to additives for organic polymers. The Examiner has rejected the claims as having new matter and being anticipated by four references. We have jurisdiction under 35 U.S.C. § 6(b). We reverse the new matter rejection, but affirm three of the anticipation rejections.

BACKGROUND

The Specification discloses that “most additives for organic polymers are in powder form. These powders, when used during the processing of

organic polymers, have the disadvantage of being dispersed in the air and can damage the health of the operators as well as creating safety problems due to the possibility of explosions.” (Specification 1-2.) “As organic or inorganic pigments and dyes are also generally in powder form, their use in organic polymers has the same disadvantages described above.” (*Id.* at 3.)

The Specification discloses that a prior art solution to the shortcomings of powder polymer additives has been to prepare stabilizer, dye, and pigment additives in granular form. (*Id.* at 2-3.) Thus, for example, polymer additive granules have been prepared “using so-called ‘masterbatches’ containing the organic polymer to be stabilized and one or more additives in a quantity ranging from 2.5% to 60%.” (*Id.* at 2.)

The Specification discloses that additive mixtures comprising stabilizers and dyes or pigments can be obtained in granular form by extruding the additive mixture “at a temperature capable of enabling the partial or total melting of the lowest-melting component. The extrusion temperature is much lower than the temperature at which the additives are processed in the case of masterbatches, and the additives used are therefore subjected to less thermal stress.” (*Id.* at 3.)

DISCUSSION

1. CLAIMS

Claims 1-6, 8-14, and 18-21 are on appeal. Claims 15-17 are also pending but have been withdrawn from consideration by the Examiner.

The claims have not been argued separately and therefore stand or fall together. 37 CFR § 41.37(c)(1)(vii). We will focus on claim 1, the broadest claim on appeal, which reads as follows:

1. A mixture of additives for organic polymers in granular form comprising:

- one or more stabilizers for organic polymers; plus
- one or more organic or inorganic pigments; and/or
- one or more dyes or bleaching agents;

obtained by extrusion at a temperature capable of enabling the partial or total melting of the lowest-melting of said components, the molten part of which, on solidifying, act as gluing agent for the remaining components,

said inorganic pigments being selected from the group consisting of iron oxides, carbon black, talc, China clay, barites, silicates, and sulfosilicates;

said mixture being devoid of said organic polymers and carriers for said components.

Thus, claim 1 is a product-by-process claim directed to a mixture of additives for organic polymers. The mixture must be in granular form. The mixture must contain at least two ingredients: (1) a stabilizer for organic polymers, and (2) an organic pigment, one of several specific inorganic pigments, a dye, or a bleaching agent.

The Specification does not define the term “stabilizers for organic polymers.” However, the Specification (pages 4-21) lists fourteen categories of stabilizers for organic polymers, with several of the categories being relevant to the disposition of this appeal: “Stabilizers for organic polymers useful for the purposes of the present invention are selected from the following groups: 1. Antioxidants” (page 4), “1.18 Ascorbic Acid (vitamin C)” (page 10), “11. Nucleating agents such as, for example: . . . phosphates, carbonates or sulfates (preferably of earth-alkaline metals)” (page 20), and “12. Fillers and reinforcing agents such as, for example: . . . metal oxides and hydroxides” (page 21).

We therefore interpret the term “stabilizers for organic polymers” to encompass antioxidants (e.g., ascorbic acid), phosphates, sulfates, and metal hydroxides.

Claim 1 also requires the additive mixture to be “devoid of said organic polymers.” We note that the Examiner has interpreted this limitation to “only exclude[] from the granules a polymer that is of the same polymeric species as that which the granules are to be added to for stabilization and coloring purposes.” (Answer 12.) We do not agree.

Interpreting claim 1 based on the intended polymer recipient would mean that claim 1 could encompass, and simultaneously not encompass, the same composition having the same ingredients. That is, a composition comprising a stabilizer, a dye, and polypropylene would be within the scope of the claims if it was made with the intention of adding it to polyethylene but not if it was made with the intention of adding it to polypropylene.

Because the Examiner’s interpretation of claim 1 results in an inconsistent interpretation of the claim’s scope based on its intended use, we decline to adopt the Examiner’s interpretation of the limitation excluding organic polymers. *See, e.g., In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) (product claim’s intended use recitations not given patentable weight); *see also Boehringer Ingelheim Vetmedica v. Schering-Plough Corp.*, 320 F.3d 1339, 1345, 65 USPQ2d 1961, 1965 (Fed. Cir. 2003) (“An intended use or purpose usually will not limit the scope of the claim because such statements usually do no more than define a context in which the invention operates.”).

We therefore interpret the recitation “devoid of said organic polymers” to mean that the mixture does not contain any organic polymers.

Claim 1 also requires the claimed granular mixture to be “obtained by extrusion at a temperature capable of enabling the partial or total melting of the lowest-melting of said components, the molten part of which, on solidifying, act as gluing agent for the remaining components.” During examination, it is well settled that

even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985)
(citations omitted).

We therefore interpret claim 1 as encompassing any product having the claimed ingredients, and lacking the excluded ingredients, in a granular form which could result from a process having an extrusion step, even if the product is not actually made by extrusion.

2. NEW MATTER

Claims 1-6, 8-14, and 18-21 stand rejected under 35 U.S.C. § 112, first paragraph, “as failing to comply with the written description requirement.” (Answer 5.) The Examiner urges that Appellants added new

matter to the claims when they inserted¹ the recitation “said mixtures being devoid of said organic polymers” into claim 1. (*Id.*)

The Examiner urges that the Specification’s silence regarding the presence of polymers in the disclosed polymer additives “is not to be expanded to positively exclude such polymers.” (*Id.* at 6.) Rather, argues the Examiner, if Appellants’ original intention was to positively exclude polymers from the additive compositions, then they would have included an explicit statement in the Specification so stating, “and also would not have written the specification and claims as they did to read directly on various additives that can be polymeric in nature, such as fillers and reinforcing agents of claim 2, and the lubricants, emulsifying agent, and rheological additives.” (Answer 9.)

Appellants argue that the Specification provides support for the recitation “said mixture being devoid of said organic polymers” because the Specification distinguishes between the disclosed additive mixtures and polymer-containing master batches. (Br. 4.) Appellants also argue that the recitation finds support in Example 1, which describes extruding a polymer-free mixture containing two antioxidants, calcium stearate, and a pigment, to ultimately produce a granular product. (Reply Br. 6-7.)

In *In re Wright*, 866 F.2d 422, 424-425, 9 USPQ2d 1649, 1651 (Fed. Cir. 1989), the court held that a claim limitation lacking word-for-word support in the specification was not new matter because one of ordinary skill would have recognized the limitation’s presence in embodiments disclosed in the specification: “[T]he claimed subject matter need not be described in

¹Amendment filed March 29, 2004.

haec verba in the specification in order for that specification to satisfy the description requirement.” (quoting *In re Smith*, 481 F.2d 910, 914, 178 USPQ 620, 624 (CCPA 1973)).

Here, as argued by Appellants, Example 1 of the Specification provides an embodiment meeting all of the limitations in claim 1, including the limitation requiring the mixture to be devoid of organic polymers. We therefore agree with Appellants that the recitation “said mixture being devoid of said organic polymers” is not new matter. We reverse the new matter rejection of claims 1-6, 8-14, and 18-21.

3. ANTICIPATION BY NEEDHAM

Claims 1-6, 8-14, and 18-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Needham.²

The Examiner urges that Example 1 of Needham anticipates the claims because it teaches the production of dustless color granules having pigments, binders, stabilizers, and antioxidants encompassed by claim 1. (Answer 7.) The Examiner argues that claim 1 encompasses the particulated resin present in the mixture of Needham’s Example 1 because claim 1 “only excludes from the granules a polymer that is of the same polymeric species as that which the granules are to be added to for stabilization and coloring purposes.” (Answer 12.)

However, as discussed *supra*, we do not agree with the Examiner’s interpretation of the limitation excluding organic polymers because it improperly attaches patentable weight to the claimed product’s intended use. Rather, we interpret the recitation “said mixture being devoid of said organic

² Needham, U.S. Patent 5,455,288, issued October 3, 1995.

polymers” as excluding all organic polymers from the composition recited in claim 1.

Needham describes the preparation of “dustless color concentrate granules . . . by a coating process wherein a mixture including pigment, *particulated resin*, and suitable binder, is subjected to a temperature near the melt temperature of the binder” (Col. 2, ll. 39-45 (emphasis added).) Needham further discloses that “[o]rganic polymers are suitable for use as the particulated resin” (Col. 2, ll. 66-67.) Each of Needham’s examples uses “35 mesh HDPE” (*i.e.*, high density polyethylene (*see* Specification 26, ll. 18-19)), as the particulate resin. (Needham, col. 5, line 50, through col. 6, line 45.) Thus, all of Needham’s color concentrate granules contain an organic polymer, directly contrary to claim 1’s requirement that the additive mixture be devoid of organic polymers.

“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Therefore, because Needham does not meet all of the limitations of claim 1, we reverse the rejection of claims 1-6, 8-14, and 18-21 as being anticipated by Needham.

3. ANTICIPATION BY GÄNG, DEUBEL, AND YAMAUCHI

Claims 1-6, 8-14, and 18-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Gäng,³ Deubel,⁴ or Yamauchi.⁵ (Answer 7-8.)

³ Gäng et al., U.S. Patent 5,888,254, issued March 30, 1999.

⁴ Deubel et al., U.S. Patent 4,729,796, issued March 8, 1988.

⁵ Yamauchi et al., U.S. Patent 5,437,688, issued August 1, 1995.

The Examiner states that the granular leuco vat-dye preparations described by Gäng anticipate the claims. (*Id.* at 8.) The Examiner urges that claim 1 encompasses the granular product described in Gäng's Example 8, because the leucoindigo in that product is a dye encompassed by claim 1, and sodium hydroxide and ascorbic acid are the stabilizers, as recited in claim 1. (*Id.*)

Appellants argue that the Examiner has not identified a stabilizer for organic polymers in Gäng. (Br. 8.) Appellants urge that while hydroxides are listed among "Fillers and reinforcing agents" at page 21, line 4, of the Specification, Appellants "do[] not find sodium hydroxide identified among the description of the claimed 'stabilizers for organic polymers.'" (Reply Br. 14.)

We are not persuaded by Appellants' argument. In addition to sodium hydroxide, Gäng's granular product contains ascorbic acid. (Gäng, col. 6, line 42.) Ascorbic acid is listed on page 10, line 8, of Appellants' Specification as being among antioxidants useful for stabilizing organic polymers. Thus, contrary to Appellants' argument, Gäng's granular product contains a stabilizer for organic polymers.

We also do not agree with Appellants' argument regarding the use of sodium hydroxide as a stabilizer. As discussed *supra*, the Specification lists (pages 4-21) fourteen categories of "[s]tabilizers for organic polymers useful for the purposes of the present invention." (Specification 4.) Page 21 of the Specification lists "metal . . . hydroxides" as "Fillers and reinforcing agents" useful as stabilizers for organic polymers. We therefore agree with the

Examiner that the sodium hydroxide in Gäng's granular products is encompassed by claim 1's recitation "stabilizers for organic polymers."

We therefore also agree with the Examiner that Gäng discloses a product having the granular physical form required in claim 1, and the ingredients required in claim 1.

The Examiner states that the pigment granules described in Deubel's Example 1 anticipate the claims because they contain a pigment encompassed by claim 1 (Pigment Yellow 12), and two stabilizers encompassed by claim 1 (sodium hydroxide and the antioxidant pentaerythrityl-tetrakis-[3-(3,5-ditert-butyl-4-hydroxy-phenyl)-propionate]). (*Id.*)

Appellants argue that the composition in Deubel's Example 1 contains a water soluble resin, colophony, whereas "[t]he instant claims do not admit a 'carrier.'" (Reply Br. 15.) Appellants further urge that "a gluing agent is not identified in [Deubel] that is a stabilizer, a pigment, a dye, or a bleaching agent according to [Appellants'] claims." (*Id.* at 15-16.) We are not persuaded by Appellants' argument.

Deubel discloses granular pigment compositions comprising an antioxidant and sodium hydroxide. (Col. 2, ll. 30-36.) As discussed *supra*, Appellant's Specification (pages 4 and 21) lists antioxidants and metal hydroxides as stabilizers for organic polymers. We therefore do not agree with Appellants that Deubel fails to disclose compositions containing stabilizers for organic polymers.

As to the colophony present in Deubel's compositions, we agree with Appellants that claim 1 states that the composition must be devoid of

carriers. However, the Specification does not define the term “carrier.” Also, Appellants have not provided any evidence demonstrating that one skilled in the art would consider colophony to be a carrier.

Moreover, other than the limitation excluding polymers and carriers, claim 1 is open to the inclusion of any ingredient not explicitly recited in the claim, because it uses the transition term “comprising” to describe the composition. *See Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) (“‘Comprising’ is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.”). Because claim 1 is open to non-recited ingredients, and because Appellants have not demonstrated that one of ordinary skill would consider colophony a carrier, we do not agree with Appellants that Deubel fails to anticipate claim 1 because of the presence of colophony in the compositions.

The Examiner states that the granular reactive dye composition described in Yamauchi’s Example 1 anticipates the claims because it contains an organic dye encompassed by claim 1 (compound of formula (a)), sodium primary phosphate (encompassed by the term “stabilizer” in claim 1), and anhydrous sodium sulfate (asserted by the Examiner as being a rheological agent). (*Id.*)

Appellants argue that while the phosphates in Yamauchi’s Example 1 are listed in the Specification (page 20, lines 17-25) as being nucleating agents, the Examiner has incorrectly interpreted phosphates as being stabilizers for organic polymers. (Reply Br. 16-17.)

We are not persuaded by Appellants' argument. Page 20 of the Specification lists "phosphates, . . . or sulfates" as "Nucleating agents" useful as stabilizers for organic polymers. We therefore agree with the Examiner that the sodium primary phosphate in Yamauchi's granular products is encompassed by claim 1's recitation "stabilizers for organic polymers." We note that the anhydrous sodium sulfate present in Yamauchi's composition also appears to fall within the nucleating agent category of stabilizers for organic polymers described in the Specification.

To summarize, we agree with the Examiner that Gäng, Deubel, and Yamauchi each describe products having the ingredients required by claim 1, in the granular physical form required by claim 1.

Appellants argue that the products disclosed by Gäng, Deubel, and Yamauchi do not anticipate claim 1 because they are not made by the claimed process of extrusion resulting in melting of the lowest melting ingredient, which in turn yields a solidified product in which the molten portion acts as a gluing agent for the remaining components. (Br. 8, 14, 15; Reply Br. 11, 12, 15, 16, 18.) We do not find Appellants' argument persuasive.

As pointed out *supra*, "[t]he patentability of a product does not depend on its method of production. If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (citations omitted). Moreover, "[w]here a product-by-process claim is rejected over a prior art product that appears to be identical, although produced by a

different process, the burden is upon the applicants to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product.” *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983).

We agree with the Examiner that it is reasonable to conclude that the products in Gäng, Deubel, and Yamauchi are encompassed by claim 1.

The products in each of the references have the ingredients required by claim 1, in the granular physical form required by claim 1. Because they are prepared from aqueous solutions, one skilled in the art could reasonably conclude that the ingredients in the prior art products have the same spatial relationship that would result from melting the lowest temperature melting ingredient in the mixture, and extruding the melted mixture, as recited in claim 1.

Thus, in addition to having the same ingredients and physical form, the prior art products and the claimed products are both made by creating liquefied mixtures of the claimed ingredients, and then processing those ingredients into a solidified granular form. We therefore agree with the Examiner that it was reasonable to conclude that the prior art products are encompassed by claim 1.

Appellants have not pointed to any evidence of record demonstrating differences between the granular products of Gäng, Deubel, and Yamauchi, and the product recited in claim 1. We therefore conclude that Appellants have not met their burden of distinguishing claim 1 from the prior art. *See In re Marosi*, 710 F.2d at 803, 218 USPQ at 292-93.

We affirm the Examiner's rejection of claim 1 as anticipated by Gäng, Deubel, or Yamauchi. Claims 2-6, 8-14, and 18-21 fall with claim 1.

SUMMARY

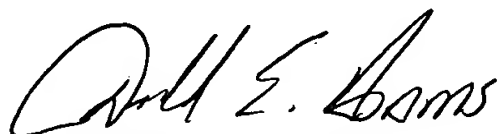
We reverse the new matter rejection of claims 1-6, 8-14, and 18-21.

We reverse the rejection of claims 1-6, 8-14, and 18-21 as being anticipated by Needham.

We affirm the rejection of claims 1-6, 8-14, and 18-21 as being anticipated by Gäng, Deubel, and Yamauchi.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv)(2006).

AFFIRMED



Donald E. Adams
Administrative Patent Judge



Eric Grimes
Administrative Patent Judge



Nancy J. Linck
Administrative Patent Judge

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) BOARD OF PATENT

) APPEALS AND

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